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***otsdaq* Brief Overview**

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Motivation

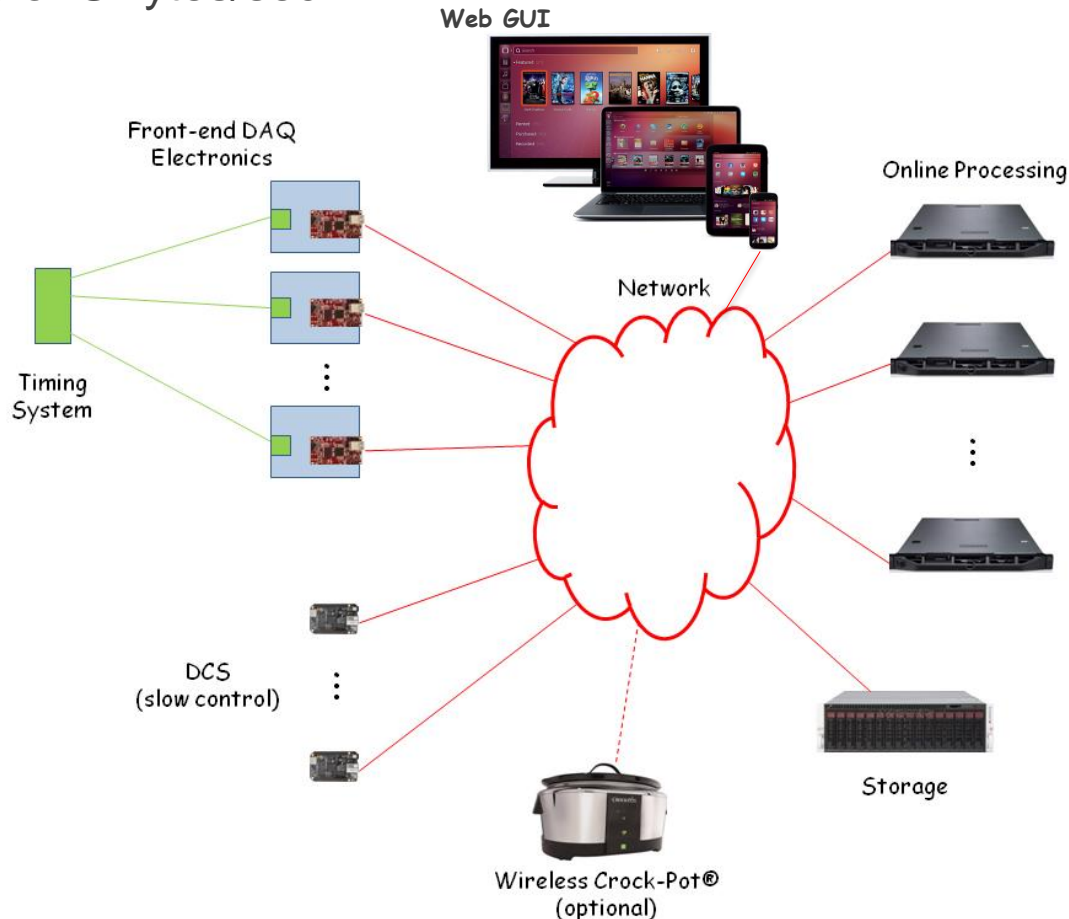
- Trends:
 - **Tighter budgets** for experiments leading to reluctance to subsidize DAQ development.
 - Industry moving from centralized crates and backplane systems to **distributed systems** connected by high speed links.
 - **Ethernet** and **Internet Protocol** has been the one communication technology standard that has far outlived any other. IoT market value was \$1.9 trillion in 2013 and estimated up to \$19 trillion by 2020.
 - \$6K for a 1U 48-port 10G Ethernet switch with throughput > 1000 VME Crates!

The Vision

- It's easy to get overwhelmed by all the IoT options when choosing a development platform.
 - otsdaq brings value to the table by surveying and narrowing the options and providing a coherent package connecting hardware and software geared toward HEP.
- We want to maintain an emphasis on scaling down.
- Let the physicists do physics instead of reinventing the DAQ wheel.

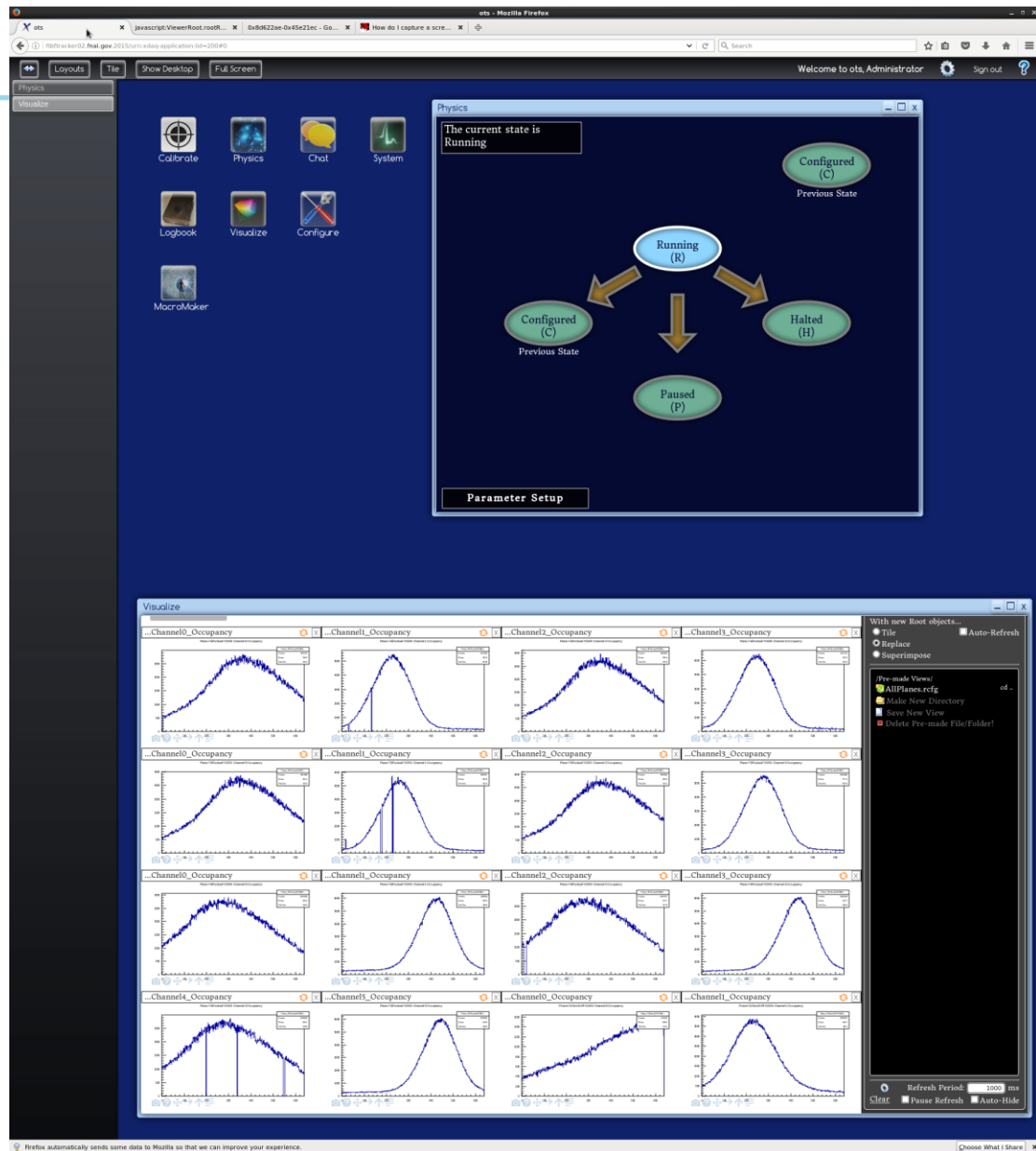
In Progress

- We are developing a **low cost**, data acquisition architecture **as a service**, based on commercial **IoT** technology that is **scalable** from a few MBytes/sec to hundreds of GBytes/sec.

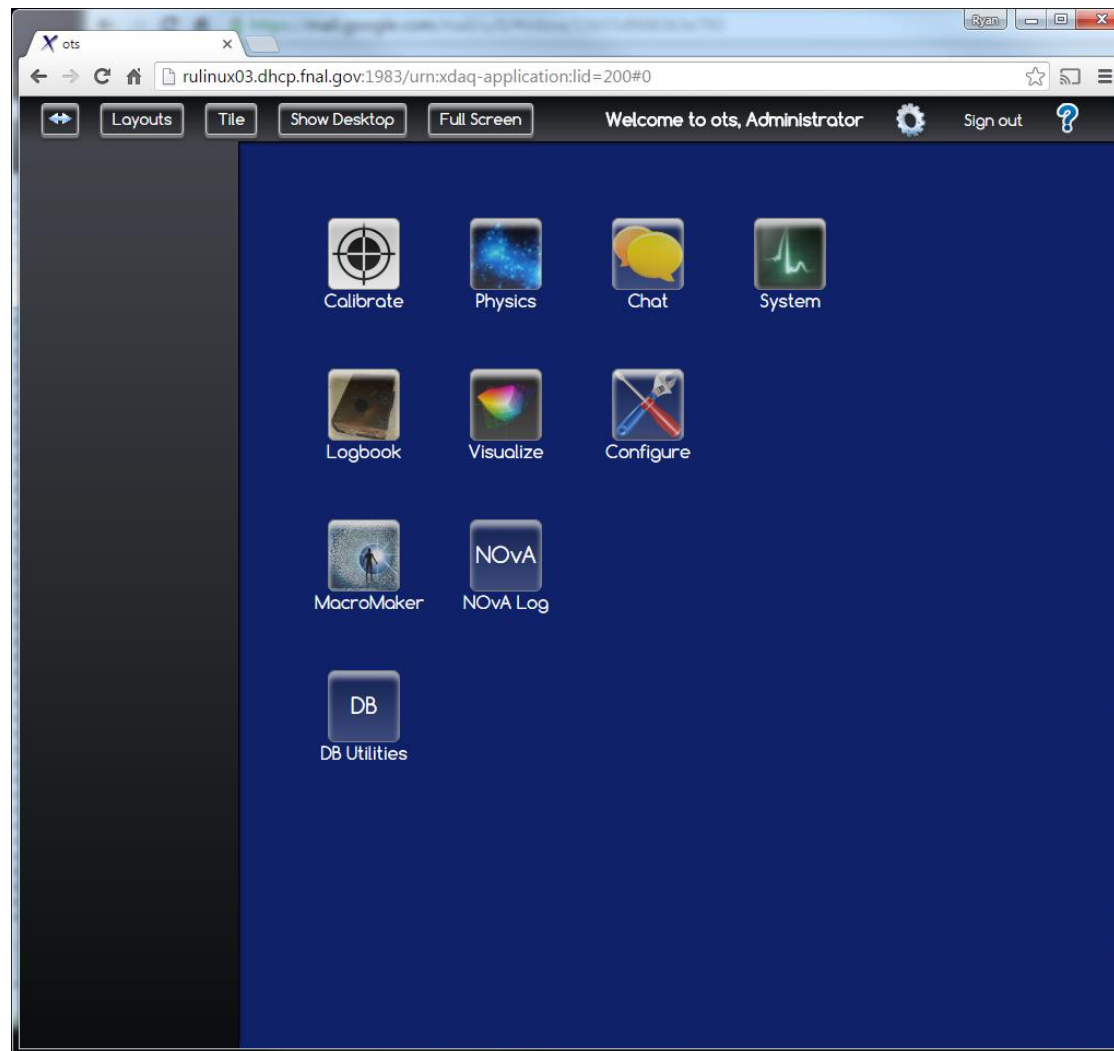


This concludes the overview

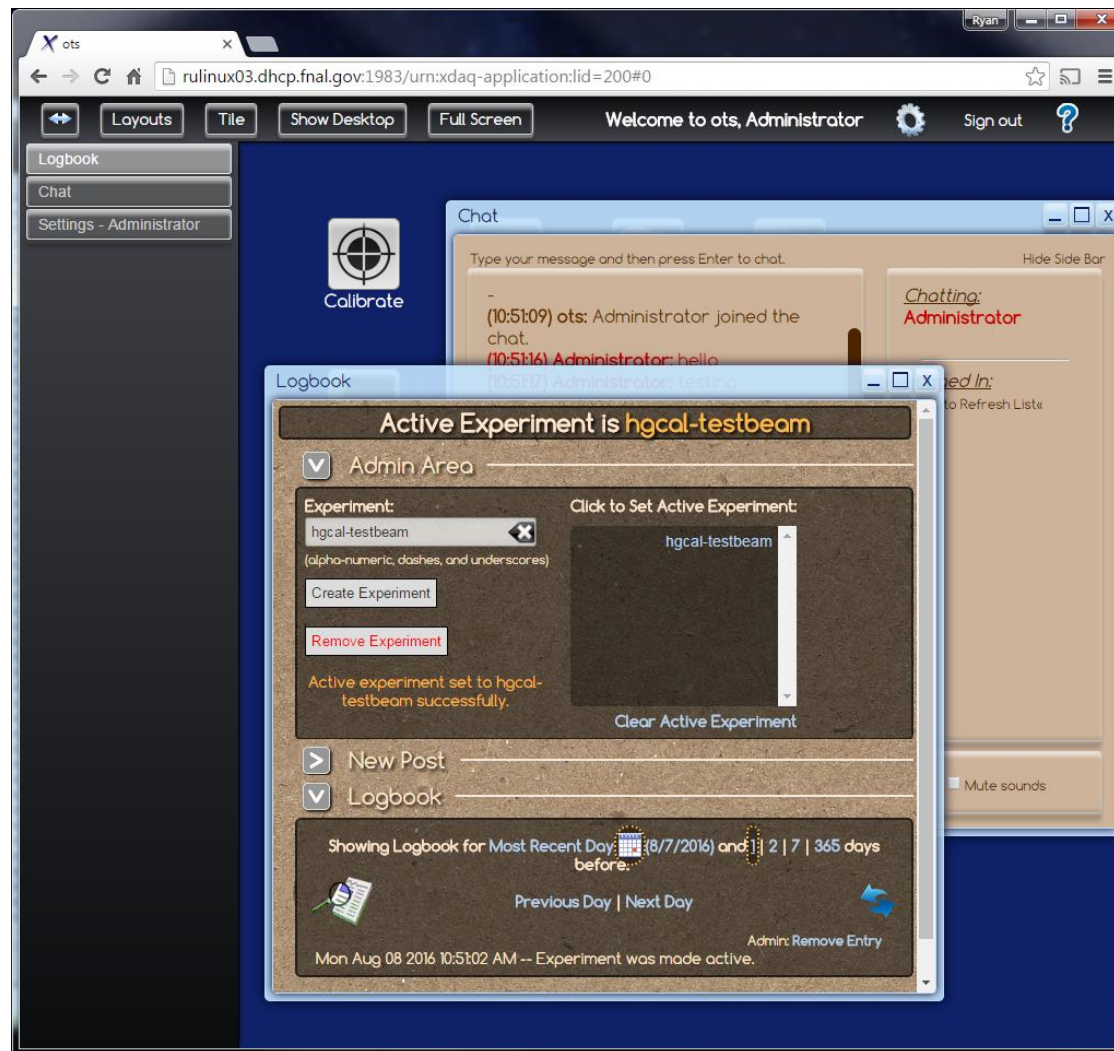
- The following slides are images of otsdaq in action.



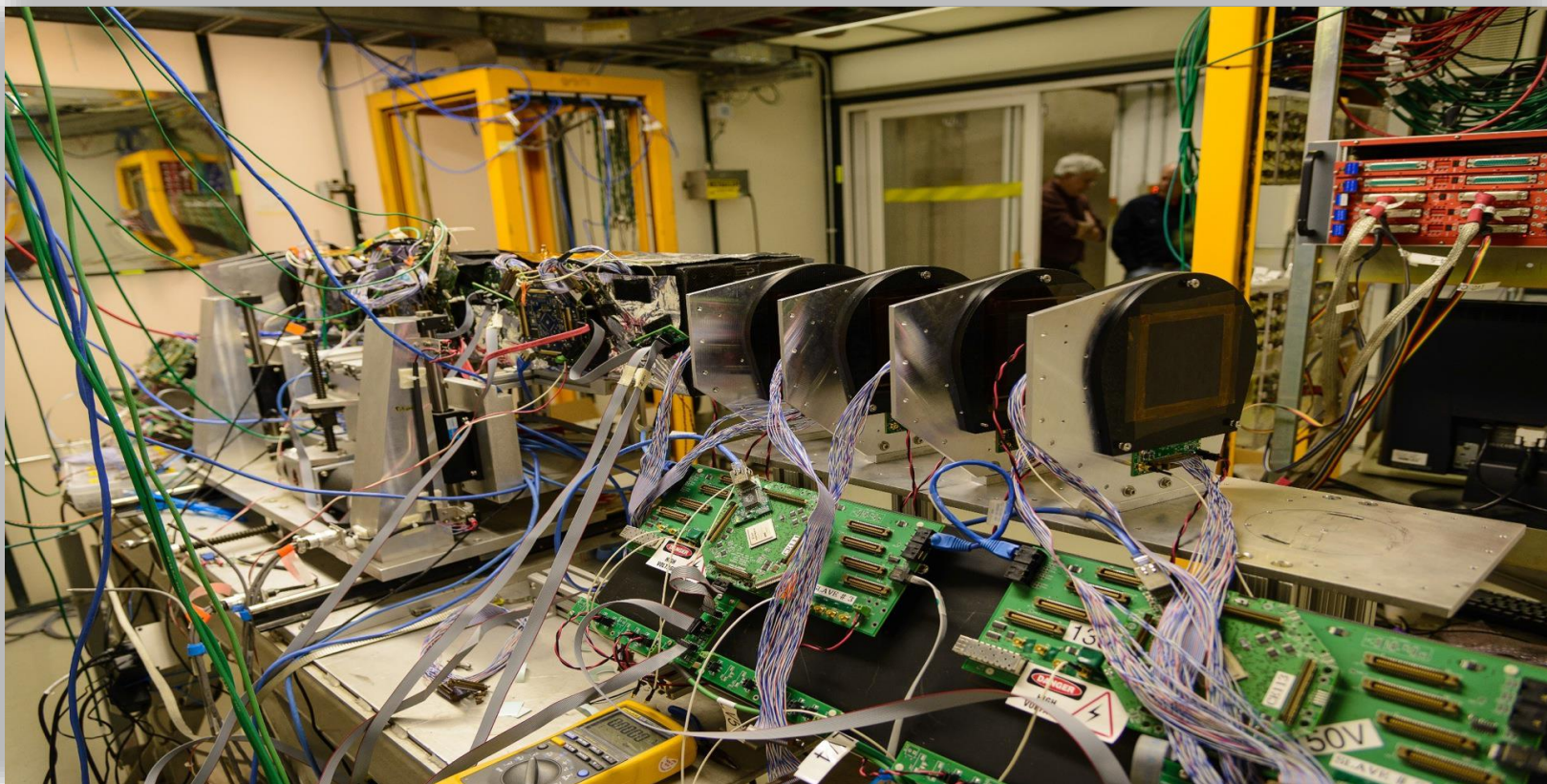
Status continued



Status continued



Fermi Test Beam Facility is Our Test Bed



Current Web GUI

The screenshot displays the OTS web GUI interface. At the top, a browser window shows the URL `rulinux03.dhcp.fnal.gov:1983/urn:xdaq-application:lid=200/#1`. The main interface includes a navigation bar with buttons for Layouts, Tile, Show Desktop, and Full Screen. A welcome message "Welcome to ots, Administrator" is visible, along with a Sign out button and a help icon. A chat window is open on the right, showing a message from the Administrator. A system message box in the top left corner states: "System Message Received at 10:39:26 admin has locked ots." The desktop area contains icons for State Machine, Chat, Logbook, Visualize, Configure, Macro Maker, and Console. The State Machine window is open, showing a diagram with states: Running (R), Configured (C), and Halted (H). The diagram includes a Start button, a transition from Configured to Running, and a transition from Running to Halted. A text box in the diagram says "Click to transition from Configured to Running". The Halted state is labeled "Previous State". A Parameter Setup button is at the bottom left, and a box at the bottom right shows "Next Run Number: 22", "Elapsed: 0:00:39", and "Setup Alarm". The Configuration GUI window is also open, showing a tree view of the configuration hierarchy under "aaContext (19)".